

Education for All?

What are the first few words that come to mind when you think about school? Are they positive, negative, or a combination of both? Consider this fact: approximately 80 million children around the world are unable to attend school.¹ When students are not able to go to school, what choices do they have for their future?


In 1948, the United Nations declared that all children have the basic right to attend school.² So why aren't all kids in school? Unfortunately, a number of barriers get in the way. Health, poverty, geographic distance, gender, child labor, and armed conflict are just a few of these barriers. For example, the violent conflict that has been going on for several years in Darfur, Sudan, has made it difficult for many children to complete their schooling.

Lack of a proper education can lead to a number of problems for individuals and nations. If the majority of a population does not have basic skills like reading and writing, the future of a country can suffer. However, as more and more people gain access to education, they will become empowered to build healthy, sustainable societies.

Often those who do not attend school are girls. Giving girls just one extra year of education increases living wages and decreases infant mortality.³ In other words, a community's economy and the health of its citizens tend to improve in communities where females attend school.

Progress in Bolivia

Bolivia is one country that has made a huge transformation in education for all. After a law passed in 1994, country leaders made a decision to reform education and ensure that all children throughout the country had access to a quality education. Changes were made such as paying teachers more,



“Education is the most powerful weapon which you can use to change the world.”

—Nelson Mandela,
the first democratically-elected President of South Africa

creating incentives for families to send their children to school, and creating lessons in the native languages of many students. Drop-out rates decreased, sixth-grade promotion rates increased, and literacy rates for both men and women increased over a 10-year period.⁴

What Can You Do?

Governments can make an impact in ensuring education for all, and so can students like you. Here are a few ways that you can advocate for children's education around the world:

- Participate in the Global Campaign for Education's "World's Biggest Lesson" in April to promote universal education. Visit: www.campaignforeducationusa.org.
- Raise money and awareness around universal education. Donate your money and time to an organization working toward this goal.
- Finish your education so that when you grow up, you can have the choices you deserve in life and become an advocate for others to have improved educational opportunities.

1 UNICEF, "State of the World's Children 2008," www.unicef.org (accessed December 1, 2008).

2 Net Aid, "Access to Education," www.netaid.org (accessed December 1, 2008).

3 United Nations World Food Programme (WFP), "Educating Girls: The Wisest Social Investment of All," www.wfp.org/food_aid/ (accessed December 1, 2008).

4 Manuel E. Contreras and Maria Luisa Talavera Simoni, "The Bolivian Education Reform 1992-2002: Case Studies in Large-Scale Education Reform," November 2003, <http://web.worldbank.org>.

Putting Sustainability on the Map

Objectives

- Plot distances between different locations on a coordinate plane
- Use distance and midpoint formulas to analyze community resource distribution
- Determine how resource distribution affects community sustainability

Investigations

1. On a piece of graph paper, use a pencil to plot the following locations of community resources found in Greenpoint, USA, and label them to indicate the resource represented by each point.

	(x, y)
Public library	(2, 4)
Landfill	(8, 9)
Hospital	(4, 6)
Jail	(7, 1)
Airport	(4, 8)
Elementary school	(6, 7)
High school	(4, 4)

2. Use the midpoint formula to determine the midpoint between the elementary school and the high school.
3. Why might you want to find the midpoint between any 2 community resources?
4. Your community voted to build a large recreational park, and now the city government is trying to decide where it should be located. There are 2 vacant lots where it could be built. Plot the following 2 points on your graph using a red pen and label them: A (1, 8) and B (5, 1).

5. Use the distance formula to calculate the following distances (in miles) from both possible park locations to key community resources. Round your answers to 2 decimal places (the hundredths place) and record them in the following table.

Community Resource	Future Park Location A (1, 8)	Future Park Location B (5, 1)
Elementary school (6, 7)		
Jail (7, 1)		
Hospital (4, 6)		

6. Based on the distances you calculated, would you choose location A or B for the new park? Explain your answer.
7. List at least 3 resources that would make a community more environmentally, economically, or socially sustainable. Explain how each resource would impact sustainability.
8. Would it be easy or difficult for someone without a car to live in Greenpoint? Why?
9. Do you think the community where you live is sustainable? If yes, what features make it sustainable? If no, what features would improve your community?

Bonus

The midpoint between the high school and the history museum is (2, 9). What are the coordinates of the history museum?

Practice with Midpoint & Distance

The **distance formula** is used to find the distance between 2 separate points, (x_1, y_1) and (x_2, y_2) .

$$d = \sqrt{(x_2 - x_1)^2 + (y_2 - y_1)^2}$$

The **midpoint formula** is used to find the midpoint of a line segment between 2 points, (x_1, y_1) and (x_2, y_2) .

$$m = \left(\frac{x_1 + x_2}{2}, \frac{y_1 + y_2}{2} \right)$$

1. In Mini City, the school location is at $(1, 7)$ and the apartment building location is at $(4, 1)$. Using the distance formula, find the distance between the school and the apartment building.
2. Builders want to create a community center in between the school and the apartment building. What is the midpoint between the 2 locations?
3. Do you think this is a good location for the community center? Why or why not?

4. The founders of Mini City wanted important community buildings to be built an equal distance from Town Hall, the center of the community. Are the post office and the library equidistant from Town Hall?

